



Co-financed by the European Regional Development Fund

Inspire Policy Making with Territorial Evidence

Potential for structural change in coal phase-out regions

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JTF actions and structural change

(a) productive investments in SMEs,

including microenterprises and start-ups, leading to economic diversification, modernisation and reconversion;

(b) investments in the creation of new firms,

including through business incubators and consulting services, leading to job creation;

(c) investments in research and innovation activities,

including by universities and public research organisations, and fostering the transfer of advanced technologies;



JTF

Policy questions

Answers and recommendations

EU industrial decarbonization is estimated to require an annual investment of up to EUR 300 bn per year? What is the most meaningful application field of the JTF?

EUR 17.5 bn accessible by all EU member states

(a), (b) and (c) actions are expected to positively moderate the effects of entrepreneurial dynamics and the regional knowledge stock on the structural change potential.

Why particularly (a), (b) and (c) actions?

Proposed JTF actions cover also social support and land restoration

(a), (b) and (c) moderate the effect of parameters that best explain the regional variance in diversification potential.

What is the social-benefit-maximising intensity of (a), (b) and (c) actions?

Complementarity of JTF actions

It can be empirically derived from evidence on regional entrepreneurial dynamics and the knowledge stock.

How to legitimise conclusions on the social-benefit-maximising intensity of (a), (b) and (c) actions?



Through an Entrepreneurial Discovery Process for design and implementation of Just Transition Plans

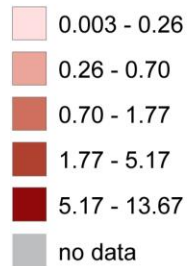
Positively moderating structural change potential

Which regions are most affected?

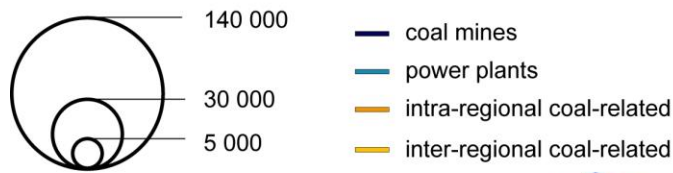


EU coal regions and coal-related employment

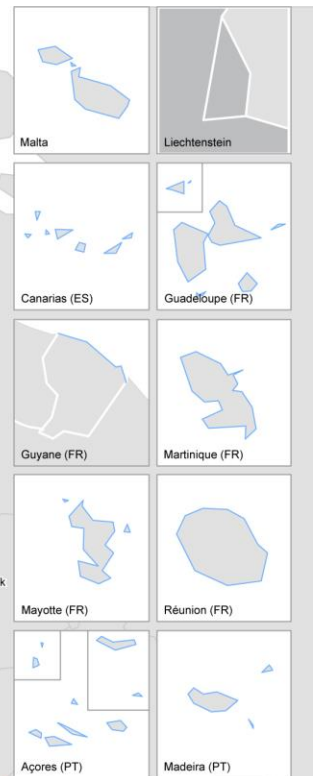
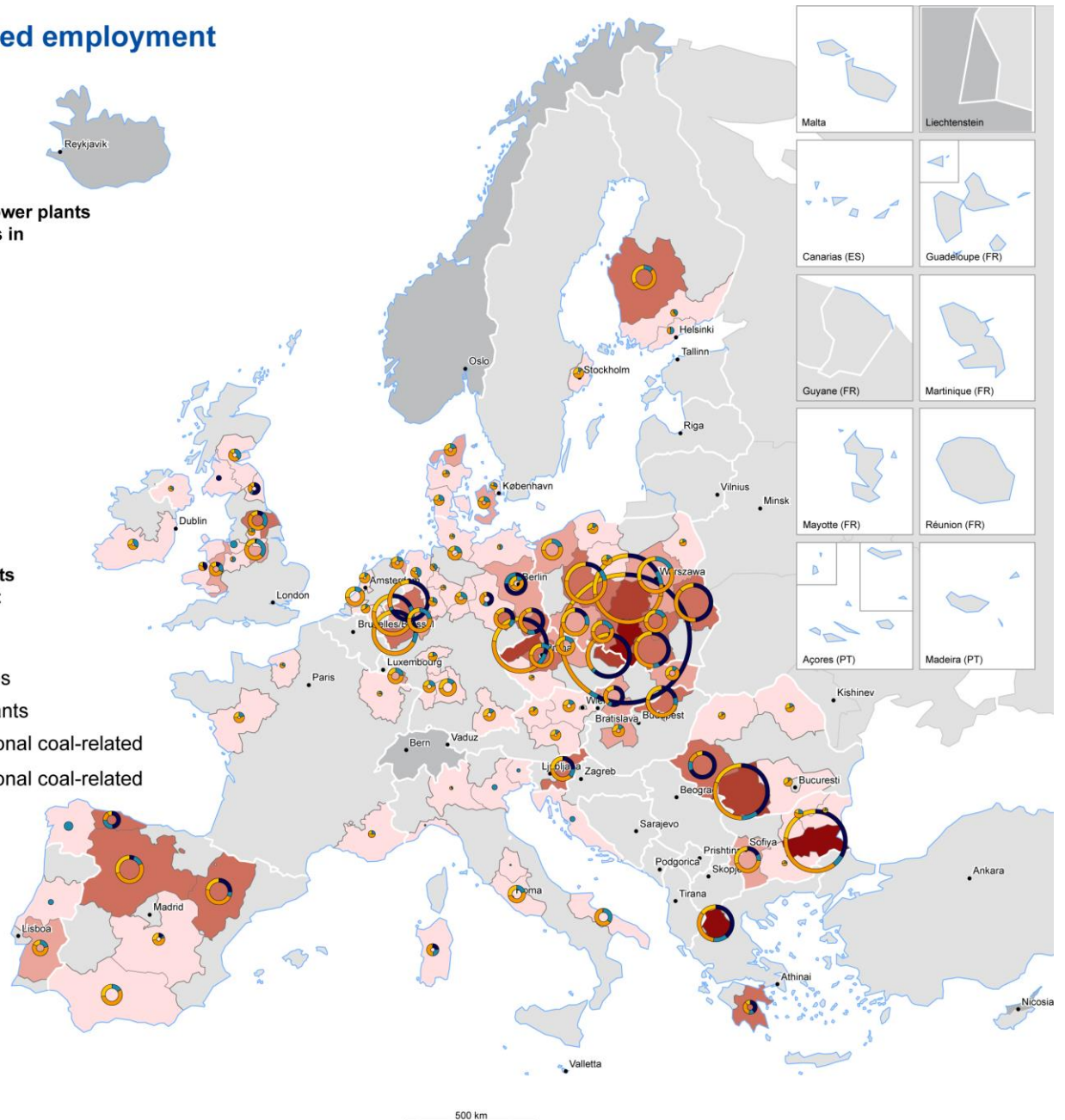
Share of direct employment in coal mines and power plants and indirect employment in coal-related activities in relation to total employment (%)



Direct employment in coal mines and power plants and indirect inter- and intra-regional employment in coal-related activities



Regional level: NUTS 2 (2013)
 Origin of data: JRC, 2018; ESPON, 2020;
 ESTAT GISCO for administrative boundaries

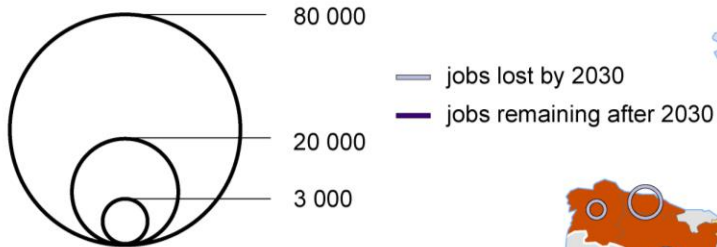


EU coal phase-out regions

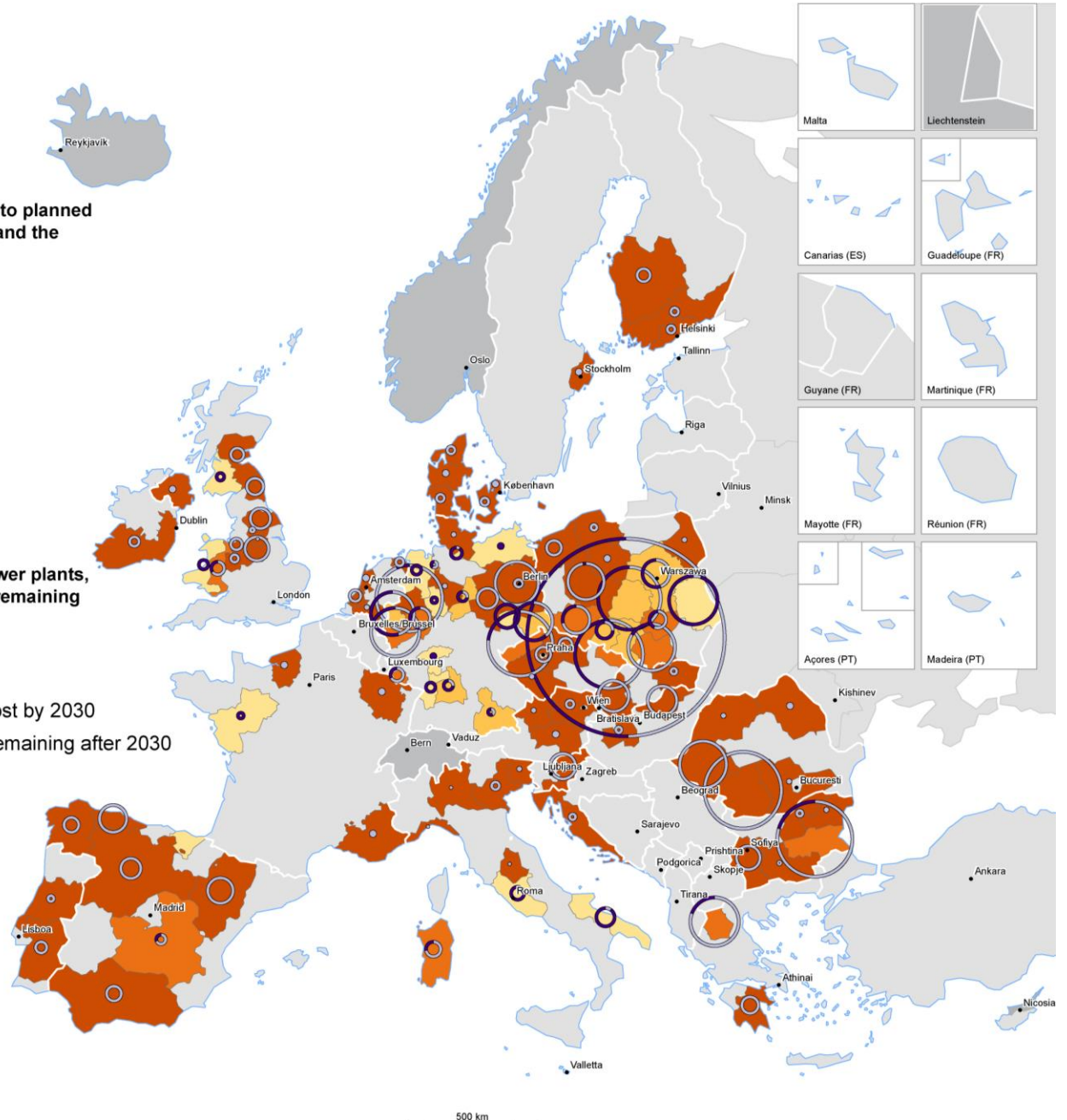
Degree of coal-phase out in EU coal regions due to planned closure of coal mines and power plants by 2030 and the respective changes in jobs

- no phase-out (0 - 15% jobs lost)
- moderate phase-out (15 - 50% jobs lost)
- substantial phase-out (50 - 85% jobs lost)
- complete phase-out (85-100% jobs lost)

Current direct employment in coal mines and power plants, job losses by 2025, job losses by 2030 and jobs remaining by 2030



Regional level: NUTS 2 (2013)
Origin of data: JRC, 2018; ESPON, 2020;
ESTAT GISCO for administrative boundaries

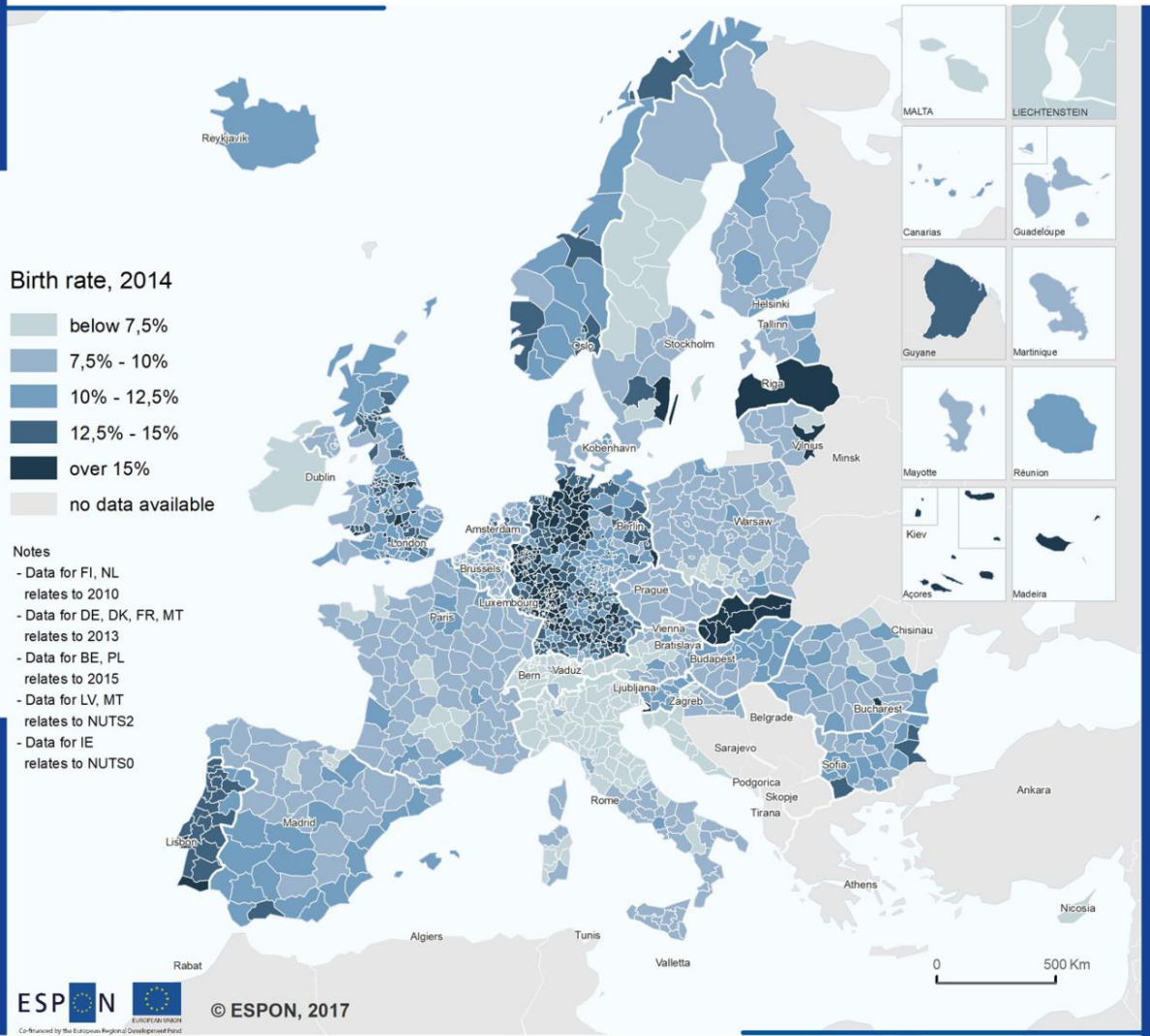


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Territorial parameters for defining intensity of R&D and entrepreneurial development policies



Birth rate, number of enterprise births divided by the number of active enterprises, 2014



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)

Source: ESPON SME, 2017

Origin of data: Eurostat Business demography, Statistics Belgium Demografie Ondernemingen, Bundesamt für Statistik Unternehmensdemographie, Orbis Database, Gewerbeanzeigenstatistik, Statistics Estonia Business demography, NACE B-S, Financial Agency, Statistics Iceland, Chamber of Commerce, Statistics Norway, Central Statistical Office of Poland, Statistics Sweden Structural Business Statistics Tillväxtanalys, Statistical Office of the Republic of Slovenia and own calculations (EIM), Office for National Statistics Business Demography SIC 2007 C G-N P-R
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EU coal phase-out regions and knowledge economy

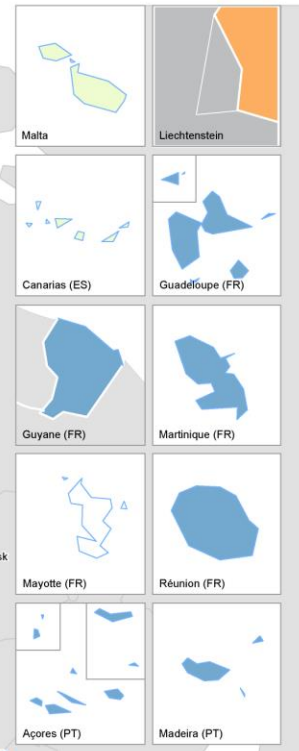
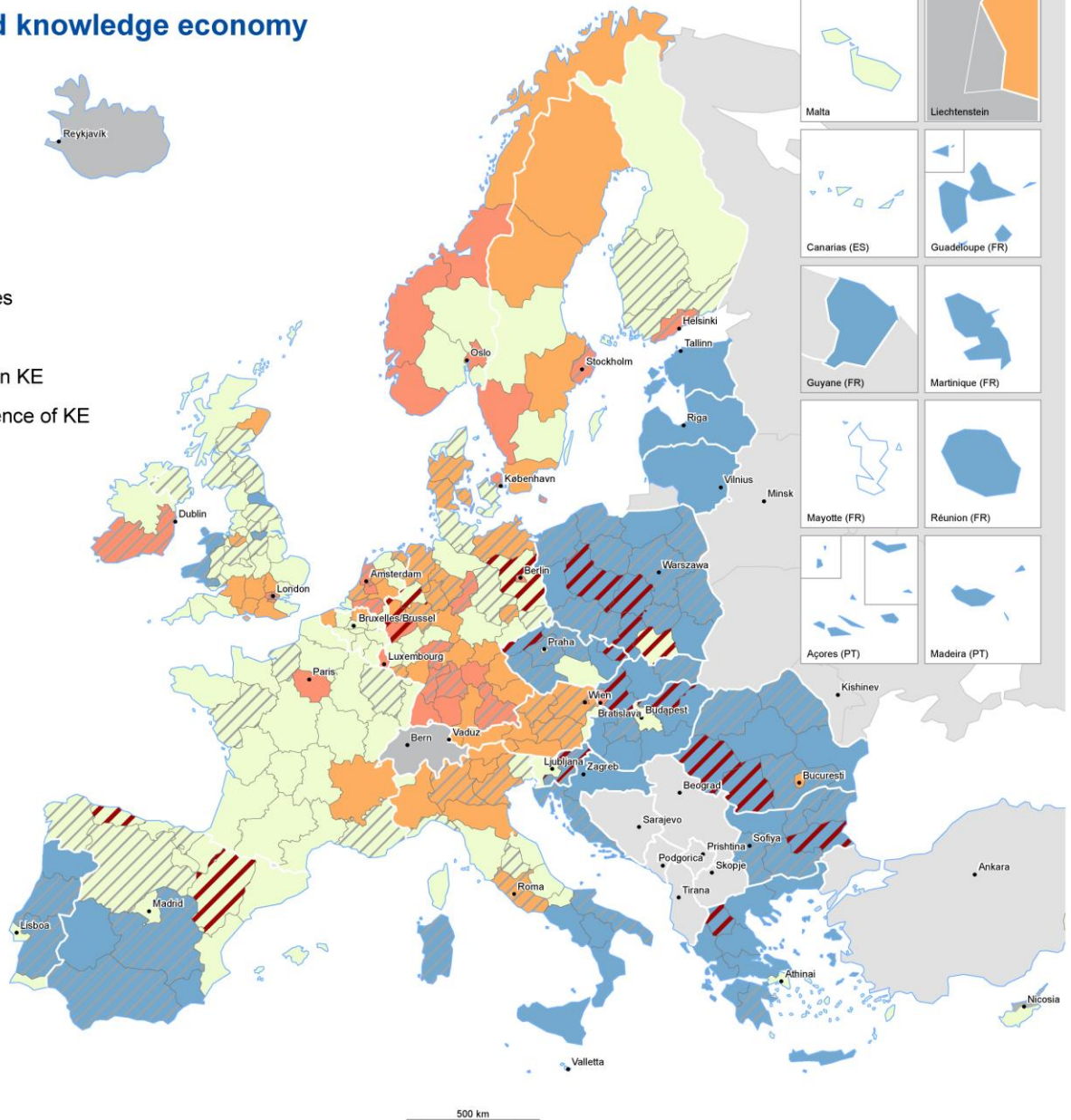
Regional knowledge economy performance, 2016

- Highly competitive and KE-based economies
- Competitive and KE-related economies
- Less competitive economies with potential in KE
- Less competitive economies with low incidence of KE
- no data

Coal phase-out regions

- main coal phase-out regions
coal related employment > 1% in regional employment
AND coal related job losses by 2030 >50%
AND/OR total job losses by 2030 >1500
- all other coal regions

Regional level: NUTS 2 (2013)
Origin of data: Eurostat, 2016; JRC 2018, ESPON 2020;
ESTAT GISCO for administrative boundaries



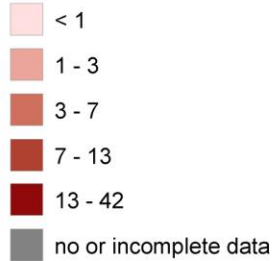
500 km

EU coal phase-out regions and FDI inflows

Value and deal type of extra-European FDI, (billion EUR), 2003 - 2015



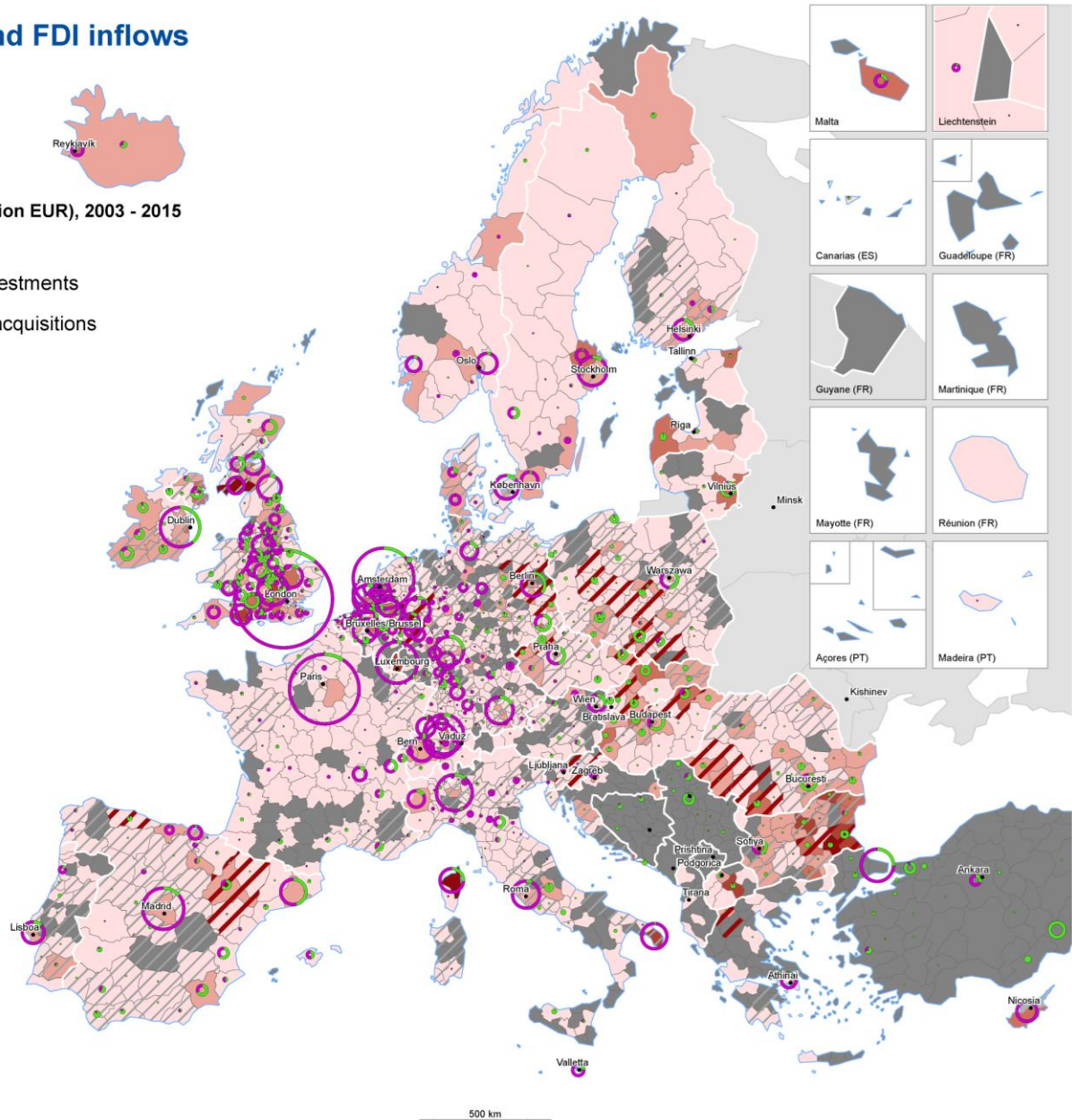
Extra-European FDI as a % of GDP, 2003 - 2015



Coal phase-out regions



Regional level: NUTS 3 (2013)
Origin of data: Copenhagen Economics, BvD's Zephyr,
Financial Times, ESPON, 2016;
ESTAT GISCO for administrative boundaries



Spatial trends in the 4.0 technology invention domain

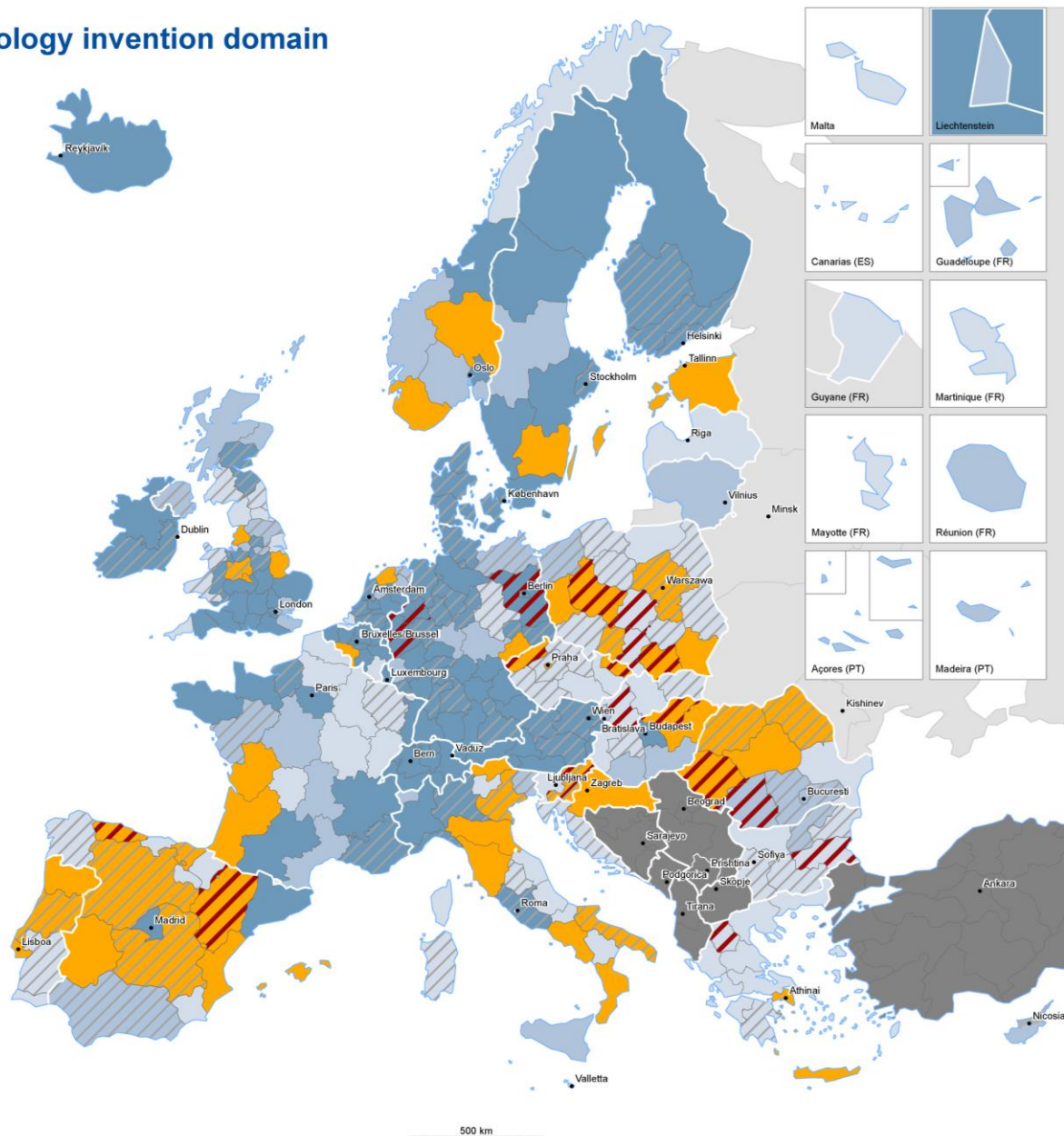
Taxonomy of 4.0 technology inventing regions, 2010–2015

- Low tech
- Technology falling behind
- New islands of innovation
- Technology leaders

Coal phase-out regions

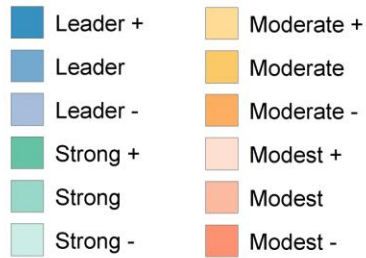
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AND/OR total job losses by 2030 >1500
- all other coal regions

Regional level: NUTS 2 (2013)
 Origin of data: JRC 2018; OECD-REGPAT, ORBIT,
 EUROSTAT, 2019; ESPON 2020;
 ESTAT GISCO for administrative boundaries



EU coal phase-out regions and innovation performance

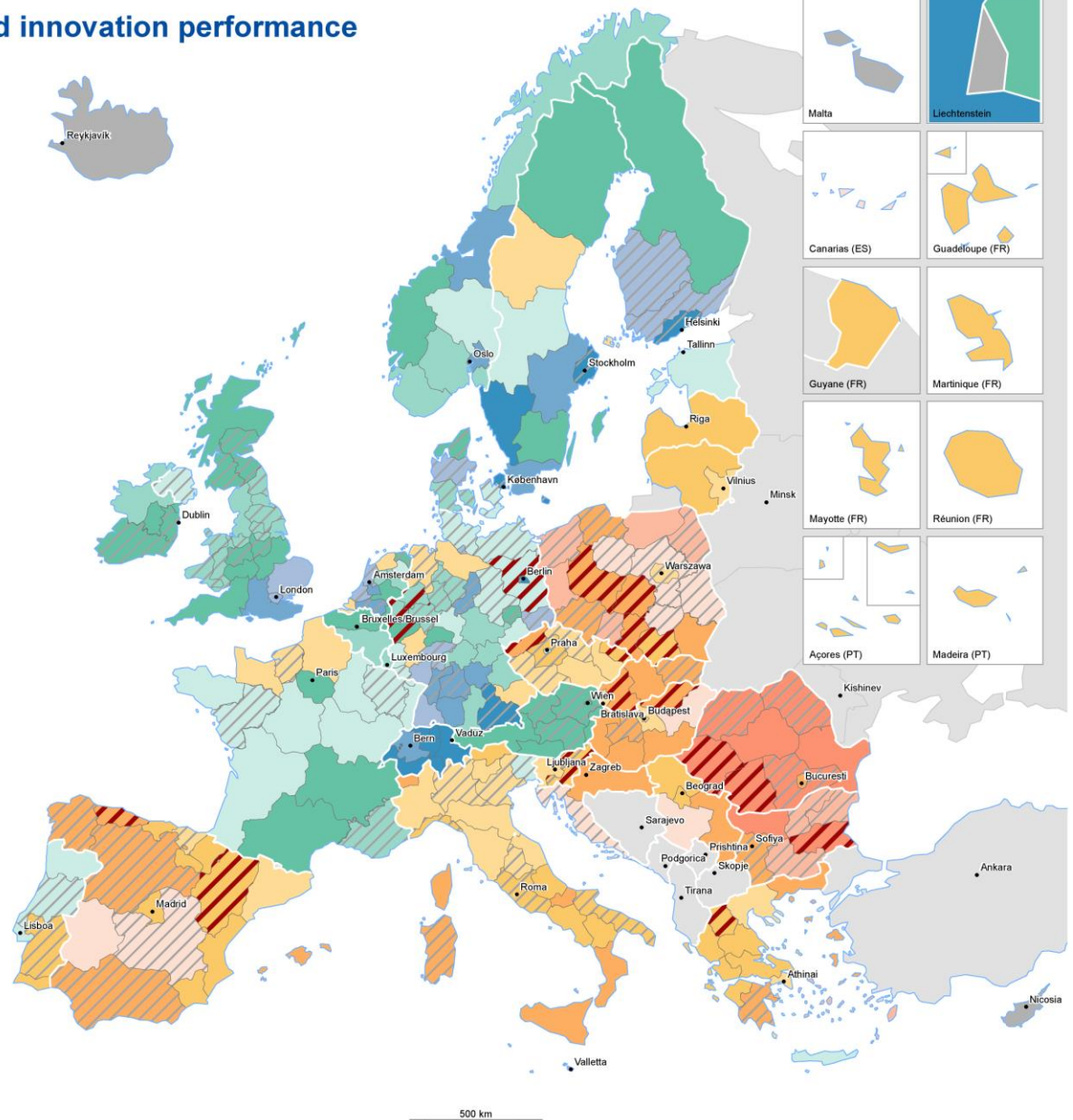
Regional innovation performance groups, 2019



Coal phase-out regions



Regional level: NUTS 2/1 (2016)
 Origin of data: JRC 2018, EC 2019;
 ESTAT GISCO for administrative boundaries



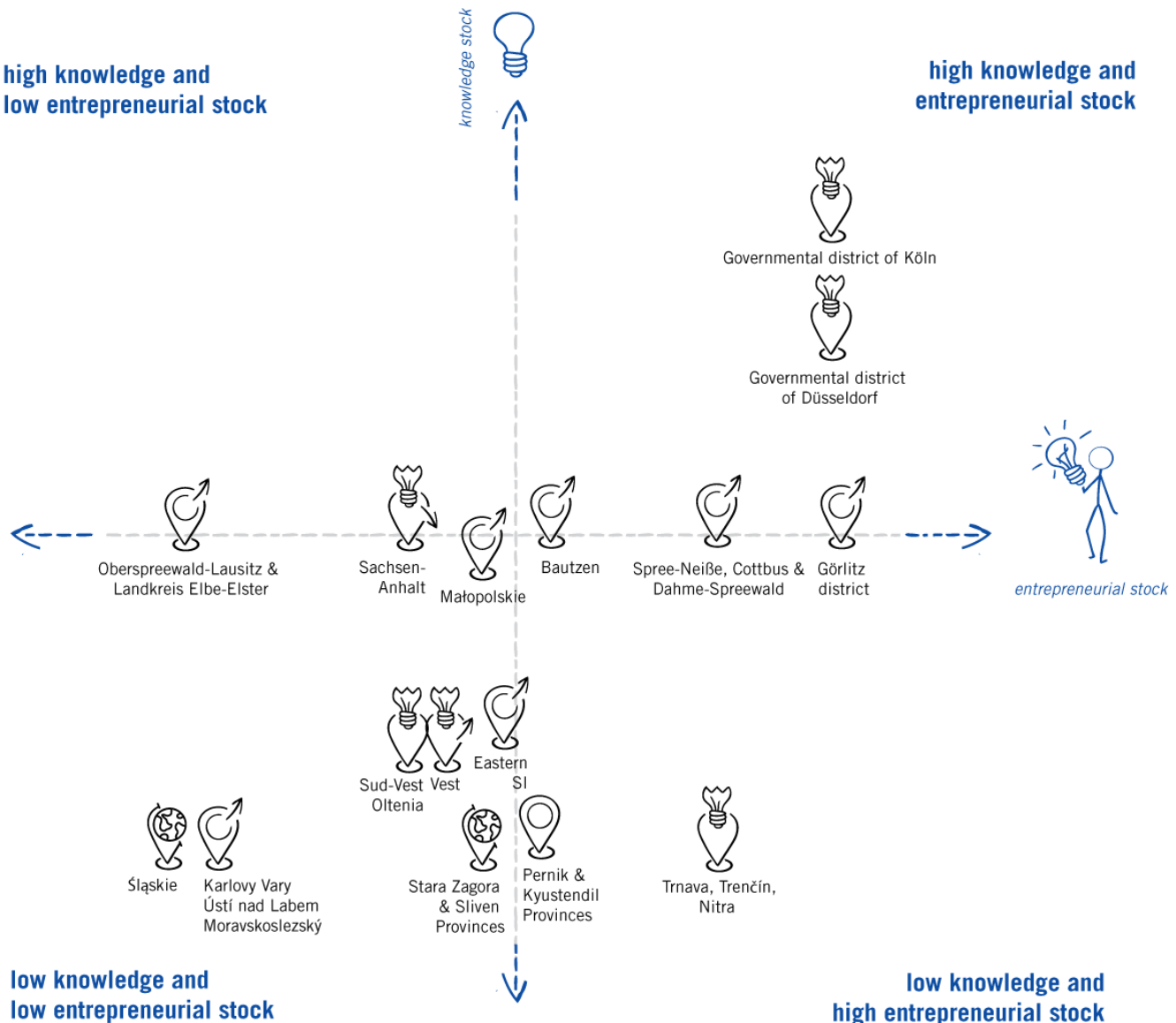
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JTF **policy mix**



**high knowledge and
low entrepreneurial stock**

**high knowledge and
entrepreneurial stock**



**low knowledge and
low entrepreneurial stock**

**low knowledge and
high entrepreneurial stock**



Above-median class of enterprise death rates at least 12,5 %



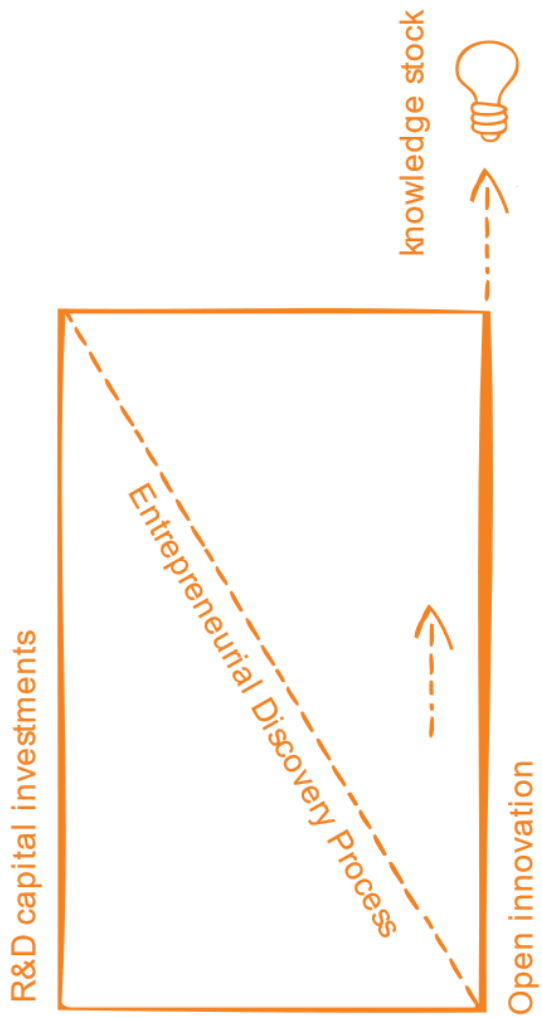
Share of extra-European FDI 3-7 % of GDP



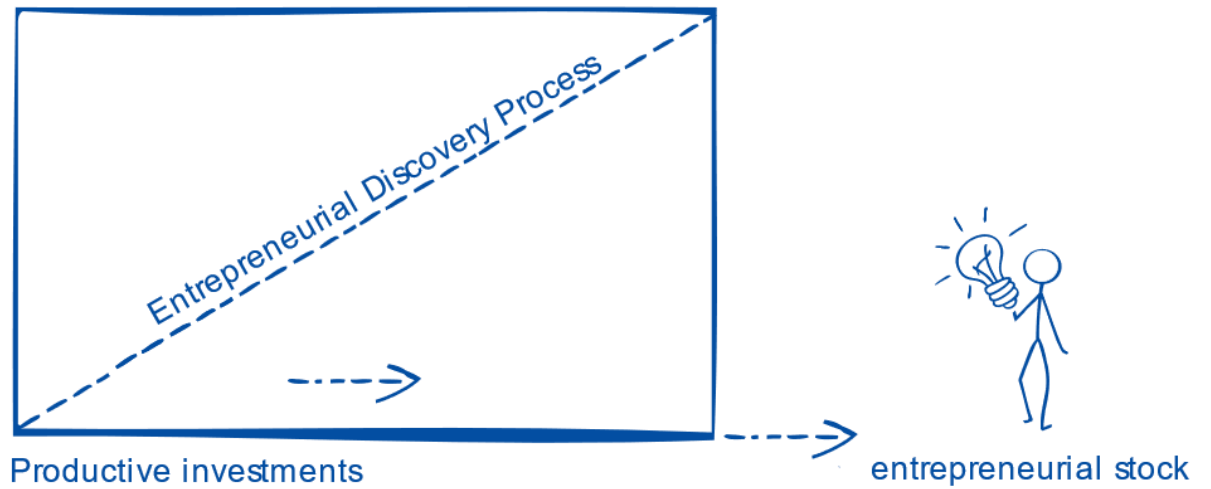
Technology improvement or leapfrogging



Not living up to expectations



Business incubation





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Thank you

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